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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/774,671	02/09/2004	Donald Pakman Liu	8893-90928	9435

24628 7590 05/29/2007  
WELSH & KATZ, LTD  
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CHICAGO, IL 60606

EXAMINER
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SHAPIRO, JEFFERY A

ART UNIT	PAPER NUMBER
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3653

MAIL DATE	DELIVERY MODE
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05/29/2007

PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

# Office Action Summary

Application No.

10/774,671

Applicant(s)

LIU ET AL.

Examiner

Jeffrey A. Shapiro

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

## Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

## Status

- 1) ☒ Responsive to communication(s) filed on 12 March 2007.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

## Disposition of Claims

- 4) ☒ Claim(s) 1-22 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-22 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

## Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 12 March 2007 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

## Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

## Attachment(s)

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)                                | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                       | 5) <input type="checkbox"/> Notice of Informal Patent Application                       |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____  |

## DETAILED ACTION

### *Drawings*

1. The drawings were received on 3/12/07. These drawings are acceptable.

### ***Claim Rejections - 35 USC § 103***

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3. **Claims 1-7, 12-16 and 22**, as best understood, are rejected under 35 U.S.C. 103(a) as being unpatentable over Brugger et al (US 7,036,650 B2) in view of Baughman (US 5,404,985) and further in view of Lejman et al (US 2004/0192403 A1).

Regarding **Claims 1, 12 and 22**, Brugger discloses a bill validator (230, 350) having a magnets (105, 106) mechanically coupled to a document path (see figure 6), that moves from a first position (a lower location, perpendicular to the direction of travel) to a second position (a higher position vertically with respect to said lower location) solely through the mechanical coupling in response to a user accessing the document path to insert a document. Note that Applicants' limitations "mechanically coupled to the document path" are interpreted to mean in mechanical communication/support/contact with at least one document path surface. This distinction is made, since it is impossible to actually couple to the path itself, since the path is considered to be a volume of space through which the document travels. The path surfaces actually contain the document

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path. The magnetism of magnet (105, 106) causes first and second control signals to cause hall-effect switches (106 and 107) to close. See col. 6, lines 2-12, and 42-59; col. 7, lines 1-10, 66 and 67, and col. 8, lines 1-7.

Regarding **Claims 4-9 and 15-19**, Brugger discloses the mechanical coupling to include a deflectable guide (50) which comprises a set of rollers, i.e., a rotatable disk assembly, having rollers and a shaft, the assembly attached to a superstructure including plates (100, 102, 103) which support magnets (105, 106) at locations *relative* to opposite ends of each shaft. Brugger further discloses springs (71-73) which urges the upper set of shafts and associated rollers towards the other, bottom set, i.e., the document path located between the two sets of rollers at col. 5, line 64-col. 6, line 2 and col. 6, lines 37-43.

As described in **Claims 1, 12 and 22**, Brugger does not expressly disclose, but Baughman discloses a latch circuit in the form of interrupt circuit (168) that is releasably latched by activation of the reed switch (96, 376) by magnet (74, 374) to activate a validator microprocessor (20) from a standby mode to a counting (active) mode. See Baughman, col. 8, lines 10-40, col. 10, line 53-col. 11, line 24, col. 19, lines 10-35 and figures 3, 5 and 7.

As described in **Claims 2, 3, 13, 14**, Brugger does not expressly disclose, but Baughman discloses a timer that deactivates the latch after a predetermined time period, as discussed at col. 11, lines 3-24, which mentions at lines 5-8 that an input filter (180) "provides a time constant to...debounce read switch (96). Lines 20-23 mentions a reset operation in which resistor (188) discharges capacitor (184) at a specific rate

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once the reed switch (96) reopens. Note also that a reset input from circuit (12) and its associated reset circuit (262) accepts reset signals from a return button (i.e., sensor), as discussed at col. 14, lines 39-68.

At the time of the invention, it would have been obvious to one of ordinary skill in the art to have installed a latch circuit with associated reset circuit, as taught by Baughman, in Brugger's validator, for the purpose of "waking" Brugger's validator from a standby state to an active "counting" state and back to a standby state, thereby saving energy. See Baugmann, col. 10, lines 54-58. Note that a "latch that is releasably latched" as called for in Applicants' claims, such as Claim 1, is construed as stated in Applicants' specification at paragraph 81, which refers to a "latching circuit". Thus, although the typical definition of a "latch" is a mechanical device which fastens, as stated in Meriam-Webster's Collegiate Dictionary, 10<sup>th</sup> ed., p. 657, Applicants' reference to a "latch" is considered to refer to a latch circuit as mentioned in the specification.

It also would have been obvious to replace Brugger's hall sensors with reed switches, as taught by Baugmann, for the purpose of reducing the circuitry used with Brugger's hall sensors. See Lejman, paragraph 33. One ordinarily skilled in the art would have also considered a reed switch an obvious alternative to a hall sensor, again, as taught by Lejman, at paragraph 33.

4. **Claims 10, 11, 20 and 21**, as best understood, are rejected under 35 U.S.C. 103(a) as being unpatentable over Brugger in view of Baugmann and further in view of Lejman, and still further in view of Kanagaki et al (US 4,957,243).

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Brugger discloses the bill validator described above. Brugger further discloses an inlet hopper (210) with bill placement detector (216). See col. 7, lines 44-46.

As described in **Claims 10, 11, 20 and 21**, Brugger does not expressly disclose, but Kanagaki discloses a cover (45A) that rotates to a position that blocks an entrance to a document path as illustrated at figures 3 and 6, said cover being mechanically coupled to a magnet (45B) that activates reed switch (80) that causes the controller to start, i.e., wake a shredder device transport. See Kanagaki, col. 7, lines 4-10 and 27-50 as well as figures 4-7.

At the time of the invention, it would have been obvious to one of ordinary skill in the art to have installed a cover and magnet for the purpose of closing off a particular document path in a bill validator, as taught by Kanagaki.

Although Kanagaki teaches "waking" the system upon closing the cover (45A), it would have been obvious to cause a cover to wake the system upon it's opening. One ordinarily skilled in the art would have been led to do this upon consideration of Brugger's disclosure of sensing the placement of bills in the inlet hopper (210) by detector (216). This teaching, taken in light of Kanagaki's teaching of activating a system based on movement of the cover and its magnet past a reed switch with the requirements of Brugger's device to lift the cover and place the contents into the hopper inside. Such a cover would have also provided increased protection from dust and debris entering the hopper. Therefore, one ordinarily skilled would have been led to use Kanagaki's scheme of incorporating a cover with magnet over Brugger's hopper, the

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opening of the cover causing said magnet to traverse an appropriately placed reed switch, and thereby "wake" the validation system.

### ***Response to Arguments***

5. Applicant's arguments with respect to claims 1-22 have been considered but are moot in view of the new ground(s) of rejection.

### ***Conclusion***

6. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the date of this final action.

7. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jeffrey A. Shapiro whose telephone number is

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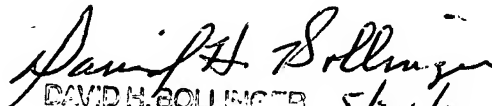
(571)272-6943. The examiner can normally be reached on Monday-Friday, 9:00 AM-5:00 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Patrick H. Mackey can be reached on (571)272-6916. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

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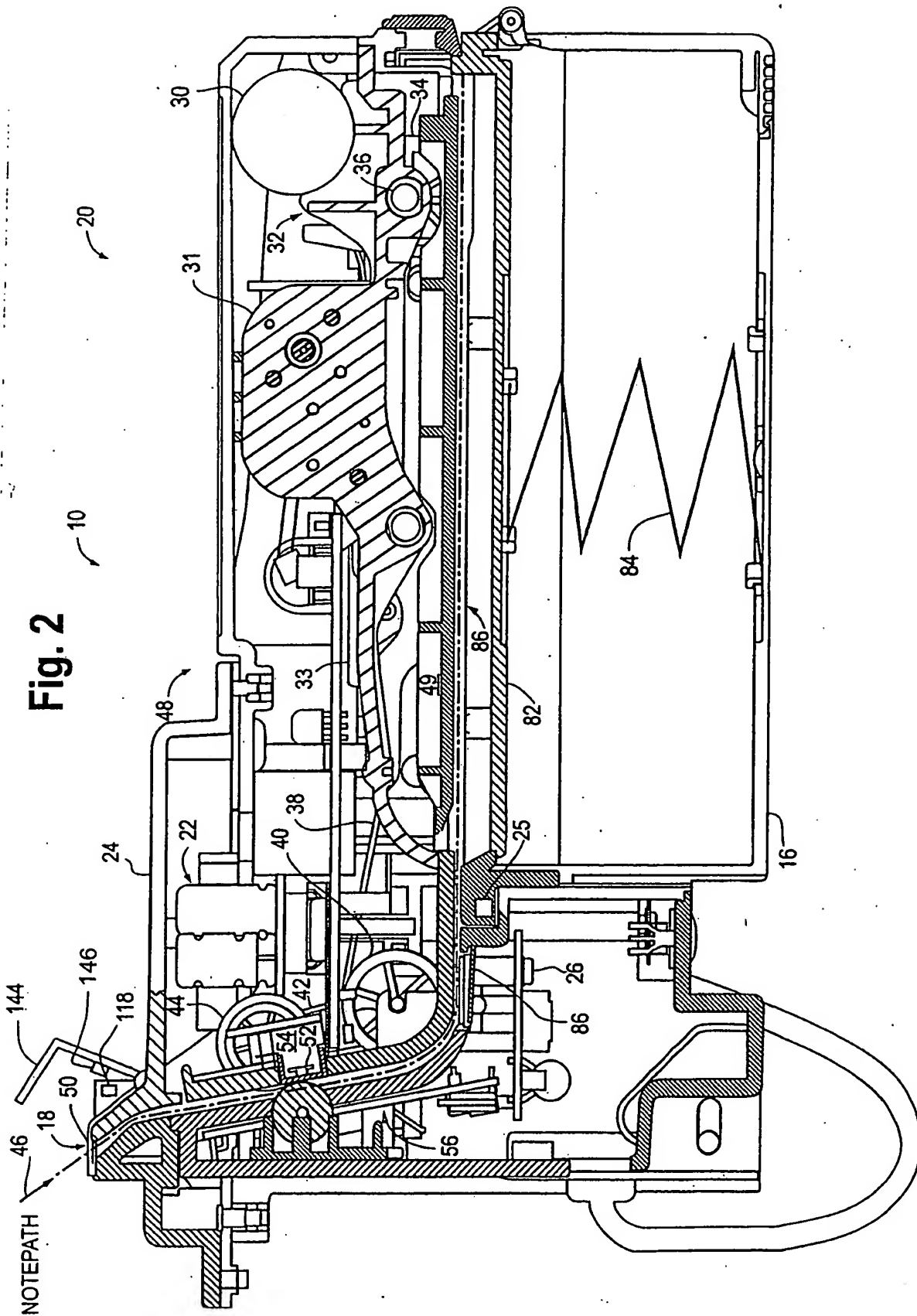
May 23, 2007

  
DAVID H. BOLLINGER  
PRIMARY EXAMINER 5/24/07



ok for entry Jul 5/23/07

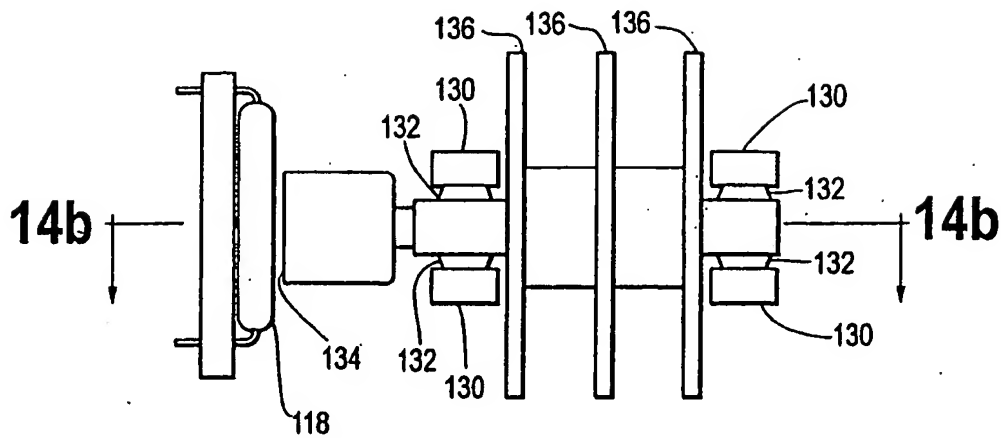
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12/12

**Fig. 14a**



**Fig. 14b**

